



Data Sheet

Heating cable

RS stock numbers
6657435, 6657444, 6657447 & 6657595

RS Cut to length heat tracing system

The **RS** heater cable is a parallel resistance, cut to length on site self regulating heating cable designed for frost protection.

The heating tape adjusts heat output to equal the heat loss from the pipe work. As pipe temperature falls under no-flow conditions or due to decreases in external or internal temperature, the output increases. As the pipe temperature increases under flow conditions or as a result of increasing external or internal temperature so output decreases.

The **RS** Heater Cable is designed to be cut from reel lengths and site terminated to suit pipework.

The heating tape has a core comprising two bus-wire conductors contained within an extruded semi-conductive self limiting heater core with an outer insulating polyolefin sheath.

The tape has an earth protection screen in the form of a Foil Jacket covering a multi strand earth lead.

The tape is finished with a further protective thermoplastic outer sheath over the earth screen.

Features

- Cut to length
- Easy to terminate
- Suitable for internal and external heating applications

Specification

Location _____ Non hazardous areas

Construction

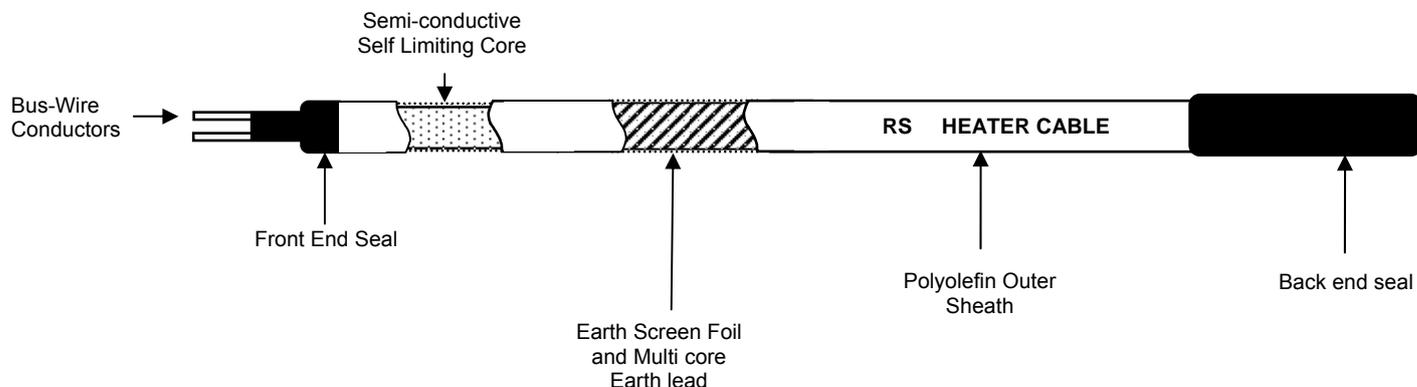
Conductors _____ Copper stranded 0.5mm²
Core _____ Semi-conductive Polymer.
Outer Sheath _____ Polyolefin
Width _____ 7.6mm
Thickness _____ 5.6mm

Withstand temperatures

Energised _____ 65°C
Un-energised _____ 65°C

Ratings

Wattage _____ 10watts/m @ 10°C
Supply voltage as standard _____ 240V



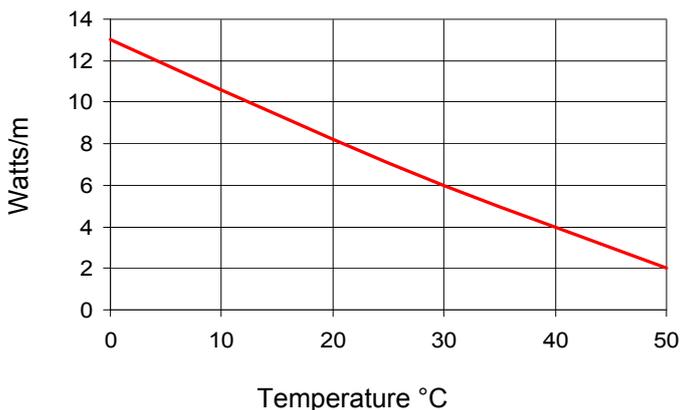


Electrical

ENGLISH

Circuit Breaker type C to EN60898
 A 30mA trip Residual Current Circuit Device (RCCB) or Earth Leakage Circuit Breaker (ELCB) is recommended for use with heating tapes.

Output



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Heat Losses (to BS EN 62395-2:2008)

To calculate heat loss per metre of pipe:-

$$\text{Heat losses } W/m = \frac{2\pi k (T_p - T_a)}{\ln\left(\frac{D_2}{D_1}\right)}$$

where:-

k = Thermal Conductivity of insulation layer at its mean temperature

T_p = Maintain Temperature

T_a = Minimum Ambient temp

D_1 = Inside Diameter of the Insulation Layer

D_2 = Outside Diameter of the Insulation Layer

Thermal Conductivity (k) for Mineral/Glass Fibre

A Design Factor Allowance should be taken of:
 Maximum heater resistance tolerance ($\pm 10\%$) and
 Voltage variation ($\pm 6\%$)

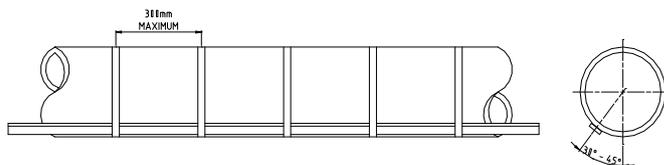
$$= \frac{1.1}{(0.94)^2} = 1.25 \times \text{Heat Loss.}$$

A further design factor of 10% may be added.

Installation

- Heating tape should be installed on clean, dry pipe free from burrs, weld splatter or any rough, sharp projections.
- Heating tape may be straight traced or spiralled along the pipe. If straight traced, the heating tape should be held in place with adhesive tape at 300mm intervals. For spiral tracing, fixing at 1m intervals is suitable.
- Use the correct adhesive tape suitable for the temperature application.
- A 30mA trip Residual Current Circuit Device (RCCB) or Earth Leakage Circuit Breaker (ELCB) is recommended for use with heating tapes.
- If in doubt about electrical installation consult a qualified electrician.
- Use mineral or glass fibre insulation and ensure that it is kept dry for maximum efficiency.
- Fit warning labels supplied on the outside of thermal insulation at approximately 3-meter intervals.
- For PVC, ABS, Polythene and other 'Plastic' pipes use heating tape not exceeding 12 watts per meter and having an earth screen covering. It is recommended that heating tape be covered in 50mm wide adhesive aluminium foil. An RCC or ELCB unit must be used in conjunction with this type of installation.
- It is recommended that all Heating tape should be installed in conjunction with a thermostatic controller.
- Heating cable should be terminated using **RS 6657431** termination kit.

HEATING TAPE STRAIGHT TRACED FIXED AT MAX 300MM



HEATING TAPE SPIRALLY TRACED FIXED AT 1000MM

